INTERIM CORRECTIVE MEASURES IMPLEMENTATION REPORT
ASBESTOS SURFACE IMPOUNDMENT
SOLID WASTE MANAGEMENT UNIT
OCCIDENTAL CHEMICAL CORPORATION
WICHITA, KANSAS

Prepared for

OCCIDENTAL CHEMICAL CORPORATION
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Wichita, Kansas 67277

Prepared by

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16 April 2008

W.O. No. 12340.011.001

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1. INTRODUCTION

The Occidental Chemical Corporation (OCC) facility in Wichita, Kansas (RCRA ID No. KSD007482029) completed an Interim Corrective Measure (ICM) in November 2006 to mitigate a potential threat to human health and the environment related to the discovery of near-surface, asbestos-containing material believed to be associated with a historical asbestos surface impoundment (ASI) solid waste management unit (SWMU) at the facility. This ICM Implementation Report provides information regarding discovery of the area, assessment of the area, and construction of a concrete cap over the area where near-surface, asbestos-containing material was noted. This report also provides information regarding the operation and maintenance of the ICM.

2. PROJECT BACKGROUND

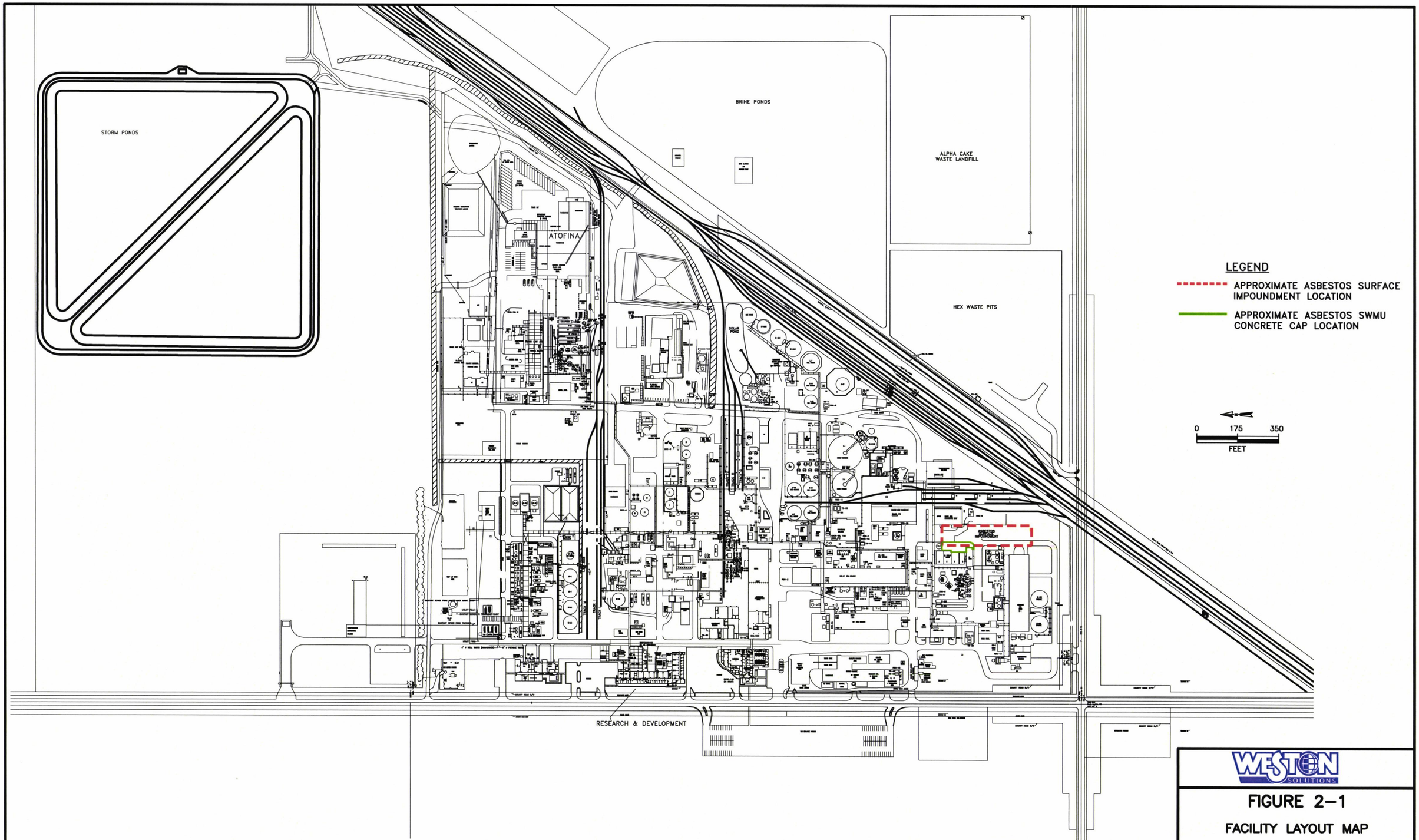
The Occidental Chemical Corporation Wichita facility began operations in the early 1950s as an Inorganic Plant. The ASI operated from 1951 to 1977 in the southern portion of the inorganic production area. Figure 2-1 shows the location of the ASI within the facility. Figure 2-2 shows the estimated size and approximate location of the impoundment relative to adjacent features. The impoundment is located directly to the east of Cooling Tower #4, the cooling tower associated with the Membrane 1 Plant, Cell Renewal, and the Chlorine Sniff Plant in the inorganic production area of the facility. The exact size of the ASI and the amount of asbestos in the area are currently unknown due to the absence of complete assessment data and the absence of historical production rates and tracking for on-site asbestos disposal.

During the period in which the impoundment was operational, asbestos-containing wastes were generated by the regeneration of diaphragm cells used in the manufacture of sodium hydroxide. The waste was transferred to the impoundment from the Waste Asbestos Handling area that is located within the Cell Repair building in the southern portion of the facility. In 1977, the plant began disposing of asbestos-containing waste in licensed off-site facilities and use of the ASI was discontinued. Construction of additional operation units in the area after 1977 resulted in the covering of the ASI with soil, rock and concrete pavement associated with operating units.

During routine maintenance activities in June 2005, maintenance personnel using a skid loader to level the area east of Cooling Tower #4 discovered a grayish-white material that was suspected to contain asbestos. Three individual grab samples were collected for characterization of the material. One sample was collected near the storm drain adjacent to the cooling tower basin, a second sample was collected near the southern boundary of the graveled area, and a third sample was collected from stockpiled excavated material. Figure 2-2 shows the approximate locations of the two samples collected from in-place material. After the samples were collected, the area was covered with tarps and plywood until completion of the ICM.

The three samples were shipped to Quantem Laboratories in Wichita, Kansas, for asbestos analysis. The analytical reports for the samples are provided in Attachment A. Table 2-1 is a summary of the

sample results. The samples were reported to contain chrysotile asbestos in concentrations ranging from 15% to 75%.



WESTON SOLUTIONS

FIGURE 2–1

FACILITY LAYOUT MAP

OCCIDENTAL CHEMICAL CORPORATION

WICHITA, KANSAS

DATE	PROJECT NO.	SCALE
APR 08	12340011001	AS SHOWN

Path\Name : H:\Glenn Springs Holdings, Inc. (12340)\Wichita\FIGURE 2-1.dwg

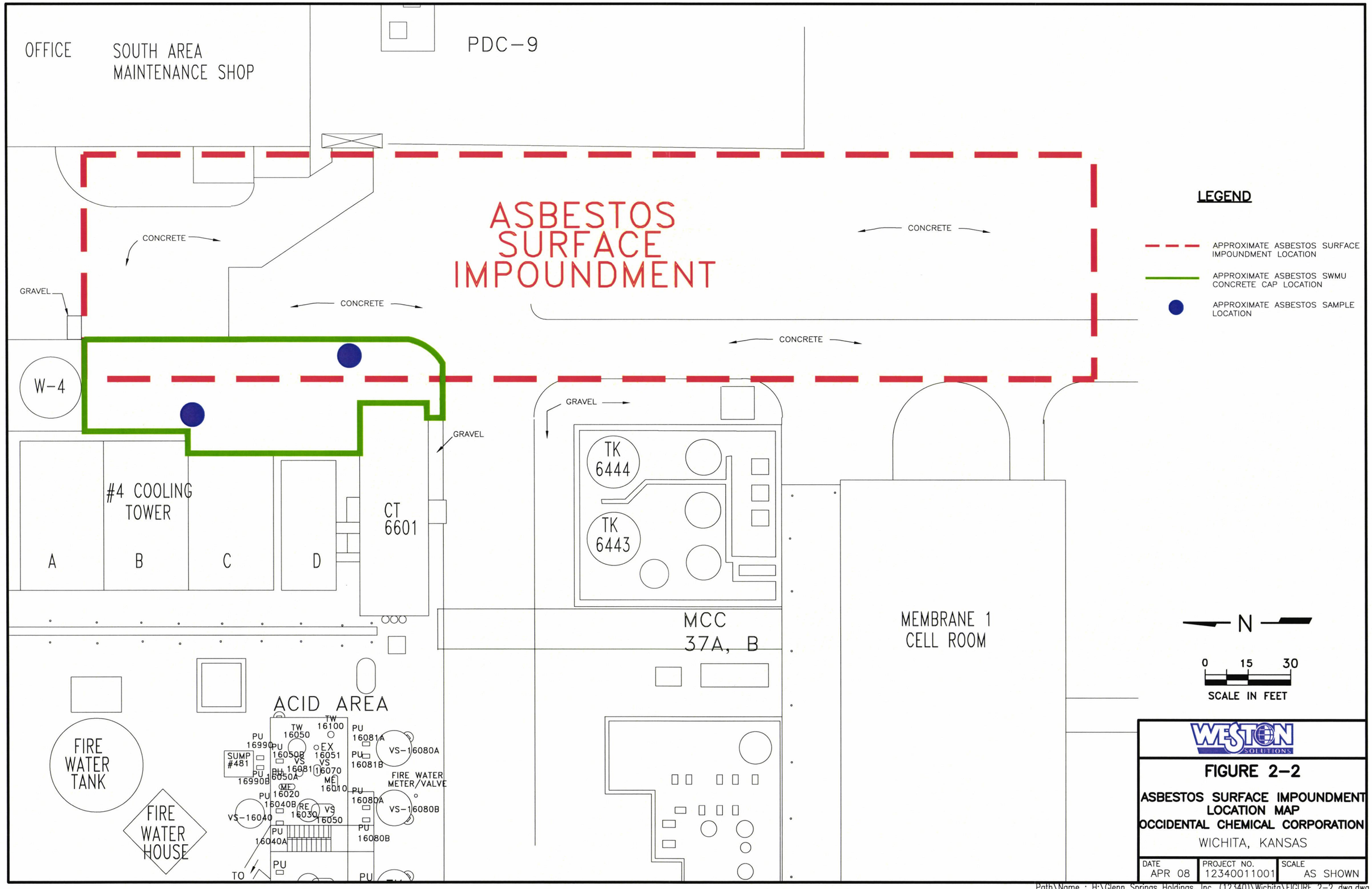


FIGURE 2-2

ASBESTOS SURFACE IMPOUNDMENT LOCATION MAP
OCCIDENTAL CHEMICAL CORPORATION
WICHITA, KANSAS

DATE	PROJECT NO.	SCALE
APR 08	12340011001	AS SHOWN

Path\Name : H:\Glenn Springs Holdings, Inc. (12340)\Wichita\FIGURE 2-2 dwg.dwg

Table 2-1
Summary of Asbestos Analytical Results
Occidental Chemical Corporation
Wichita, Kansas

Sample ID	Date	Color/Description	Type	Asbestos (%)
W16-05	6/30/2005	Gray Insulation	Chrysotile	75
W17-05	7/7/2005	Gray Insulation	Chrysotile	20
W18-05	7/7/2005	Black Insulation	Chrysotile	15

3. INTERIM CORRECTIVE MEASURES

After confirmation that asbestos-containing materials were present near the surface in the area of the ASI, OCC selected a containment option for the ICM. In order to allow for equipment access in the area of the planned ICM, a concrete cap was selected as the most appropriate option.

3.1 Cap Design

The design for the concrete cap included the following:

- 4,000 pounds per square inch (psi) concrete with ¾-inch aggregate.
- Reinforcement with 50 pounds per cubic yard (lb/yd^3) Novocon 1050 Steel Fibers.
- Site preparation, forming, and placement without grading of the existing soil/gravel surface.
- Variable thickness concrete cap with a 4-inch minimum thickness.

The concrete cap directs storm water runoff to the storm sewers in the area. Water associated with the cooling tower drains toward the containment around the cooling towers. Water that collects within the cooling tower containment is directed to the deep disposal system on-site.

3.2 Cap Construction

OCC hired Utility Contractors of Wichita, Kansas, to construct the concrete cap in November 2006. An as-built plan view of the cap and as-built design details are provided in Attachment B. Photographs of the cap are provided in Attachment C.

The full extent of the ASI SWMU is greater than the extent of the current cap. However, as shown on Figure 2-2, the approximate area of the ASI outside the cap is covered with concrete paving associated with plant operational areas.

4. MAINTENANCE AND CONTROL OF INTERIM CORRECTIVE MEASURES AREA

The Wichita facility has a preventive maintenance program that requires routine inspection of concrete areas to determine durability and sustainability. The approximate area of the ASI has been added to the preventative maintenance inspection program on an annual schedule. The detailed boundary of the ASI will be determined and the ASI further assessed during the On-Site RCRA Facility Investigation (RFI). Until completion of the RFI and implementation of the final corrective measures, an environmental review of major excavation or construction projects will be required by the facility as part of the current Management of Change (MOC) process and as a form of administrative control near the ASI in order to protect human health and prevent potential environmental impact.

ATTACHMENT A
ANALYTICAL DATA REPORTS

2033 Heritage Park Drive / Oklahoma City, OK 73120 / (405) 755-7272 / Fax (405) 755-2058

Polarized Light Microscopy Asbestos Analysis Report

QuanTEM Lab No.	125751	Client:	Precision Environmental Services 1405 South Mosley Wichita, KS 67211
Account Number:	A109		
Date Received:	07/01/2005		
Received By:	Rachel Molieri		
Date Analyzed:	07/05/2005	Project:	Basic Chemicals
Analyzed By:	Shelly Bromley	Project Location:	N/A
Methodology:	EPA 600	Project Number:	N/A

QuanTEM Sample ID	Client Sample ID	Composition	Color / Description	Asbestos (%)	Non-Asbestos Fiber (%)
001	W16-05	Homogeneous	Gray Insulation	Asbestos Present Chrysotile 75	NA

Shelly Bromley

Shelly Bromley, Analyst

7/5/05

Date of Report

PRECISION ENVIRONMENTAL SERVICES
1405 S MOSLEY • WICHITA, KS 67211
(316)265-0012 • FAX-265-8073

125751

[redacted]

CHAIN OF CUSTODY

DATE 6-30-05 PAGE 1 OF 1

CLIENT BASIC CHEMICALS
ADDRESS
PO # - will be faxed
PHONE: 316-529-7314
FAX: 316-529-7333

PROJECT
ADDRESS
BLDG #
JOB #

TEST FOR:
ASBESTOS ✓
LEAD
OTHER

TYPE OF ANALYSIS:
PLM ✓
TEM
ATOMIC ABSORPTION
TCLP
OTHER

TURNAROUND: ☐ Rush ☐ Same Day ☑ 24 hour ☐ Standard

SAMPLE NUMBER	TYPE OF CONTAINER	DESCRIPTION OF MATERIAL	
W16-05	BAGGIE	GREY FIBROUS MATERIAL	

INSPECTOR/SAMPLER DAVID KUTTLER JR

RELINQUISHED BY	DATE	RECEIVED BY	DATE
Dan Kuttler	6-30-05	Leon Conway	6-30-05
Leon Conway	6-30-05	R Molina	7/1/05 9:45am

QUANTEM® LABORATORIES

2033 Heritage Park Drive / Oklahoma City, OK 73120 / (405) 755-7272 / Fax (405) 755-2058

Polarized Light Microscopy Asbestos Analysis Report

QuanTEM Lab No. 125972
Account Number: A109
Date Received: 07/08/2005
Received By: Rachel Molieri
Date Analyzed: 07/08/2005
Analyzed By: Amy Gill
Methodology: EPA 600

Client: Precision Environmental Services
1405 South Mosley
Wichita, KS 67211

Project: Basic Chemicals
Project Location: N/A
Project Number: N/A

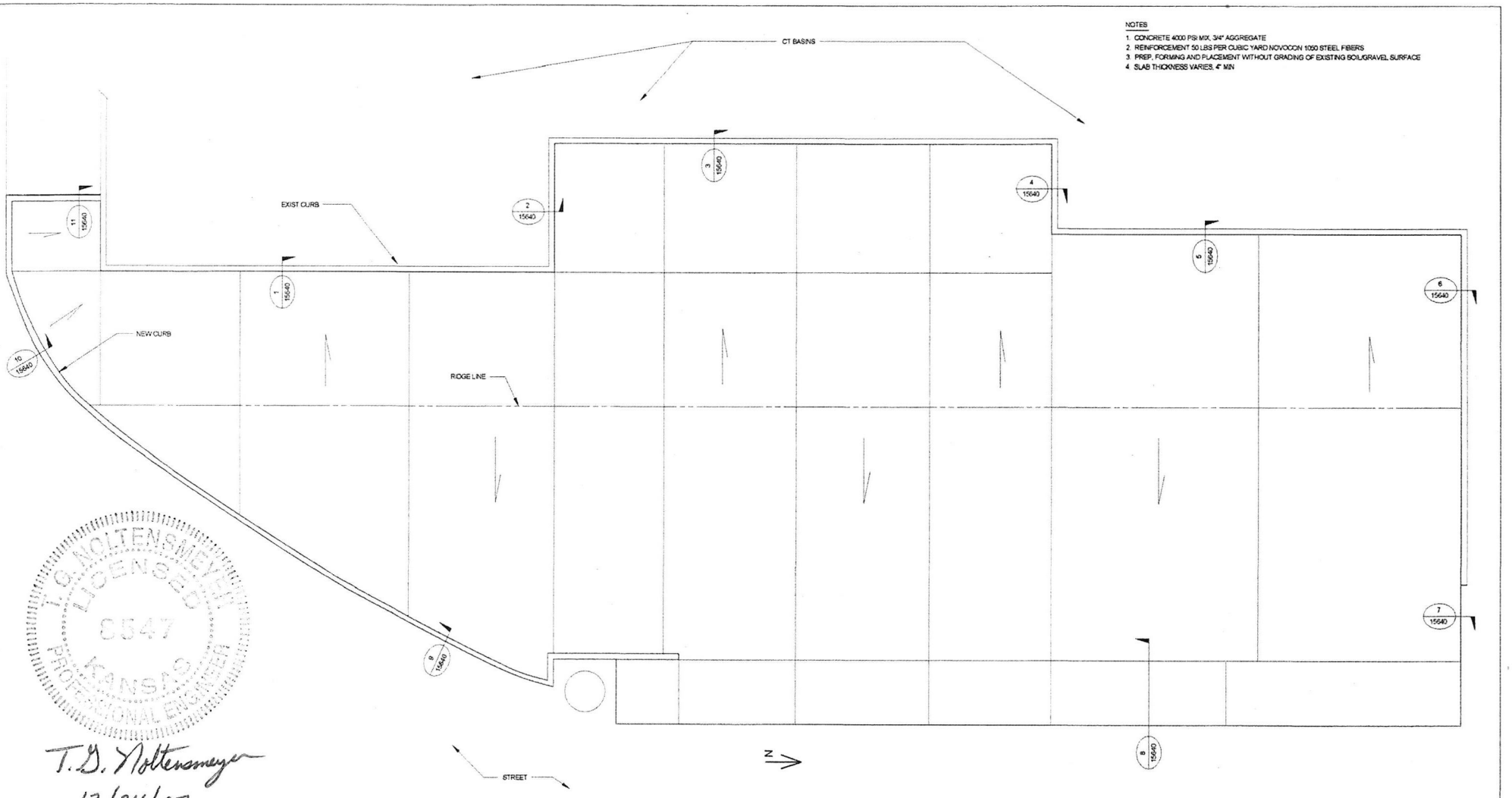
QuanTEM Sample ID	Client Sample ID	Composition	Color / Description	Asbestos (%)		Non-Asbestos Fiber (%)
001	W17-05	Homogeneous	Gray Insulation	Asbestos Present Chrysotile	20	NA
002	W18-05	Homogeneous	Black Insulation	Asbestos Present Chrysotile	15	NA

Amy Gill, Analyst

7/8/05
Date of Report

ATTACHMENT B
DESIGN DRAWINGS

NOTES
1. CONCRETE 4000 PSI MIX, 3/4" AGGREGATE
2. REINFORCEMENT 50 LBS PER CUBIC YARD NOVOCON 1050 STEEL FIBERS
3. PREP, FORMING AND PLACEMENT WITHOUT GRADING OF EXISTING SOIL/GRAVEL SURFACE
4. SLAB THICKNESS VARIES, 4" MIN



PLAN - PAVING EAST SIDE

T. G. NOLTENSMEYER LICENSED 8547 KANSAS PROFESSIONAL ENGINEER

T.G. Noltensmeyer
12/24/07

OCCIDENTAL CHEMICAL CORPORATION
WICHITA, KANSAS

COOLING TOWERS
CT-17004 (CT-4)
PAVING - EAST SIDE
PLAN

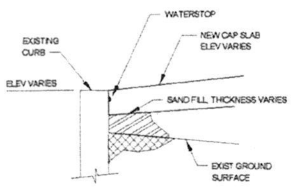
JOB CONT	A231	DWN BY	SN	ENG	SEC - S. Noltensmeyer
DESIGN DATE	12/17/07	CHK BY		PRJ MGR	Swain Boyce
SCALE	1/4"=1'-0"	LAYOUT SHEET		DWG NO	3-1-2-15639
				REV	1

APPROVED FOR CONSTRUCTION WHEN SIGNED BELOW
OCC PRJ MGR
DATE
CON PRJ MGR
DATE

DWG NO	REFERENCE DRAWINGS	REV	DATE	JOB
3-1-2-15640	CT-17004 PAVING EAST SIDE - SECTIONS & DETAILS			

DRAWING HISTORY & REVISIONS	DWN BY	CHK BY	PRJ ENG	REV	DATE	JOB
AS-BUILT FOR CERTIFICATION				1	12/24/07	
ISSUED FOR CONSTRUCTION, MANUAL DWGS PER SEC				0	4/14/06	

DRAWING HISTORY & REVISIONS	DWN BY	CHK BY	PRJ ENG



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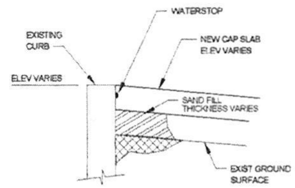

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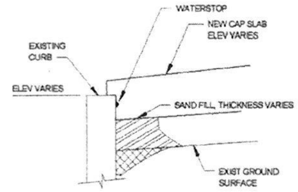

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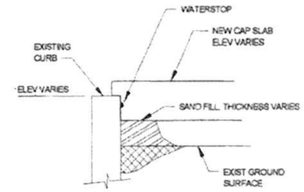

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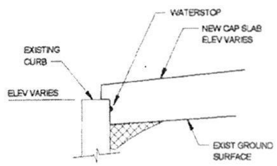

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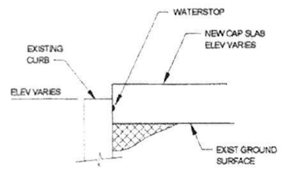

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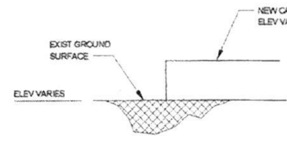

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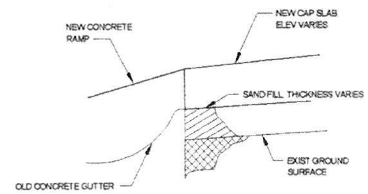

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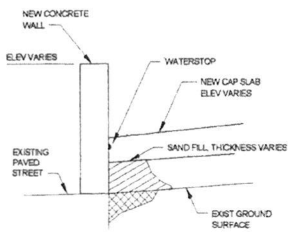

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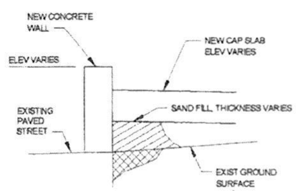

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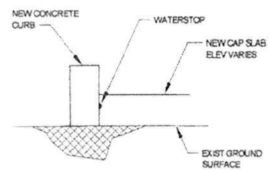

SECTION 11
DWG 15639

T. G. NOLTENSMEYER
LICENSED
8547
KANSAS
PROFESSIONAL ENGINEER

T. G. Noltensmeyer
12/24/07

OCCIDENTAL CHEMICAL CORPORATION
WICHITA, KANSAS

COOLING TOWERS
CT-17004 (CT-4)
PAVING - EAST SIDE
SECTIONS & DETAILS

DWG. NO.	REFERENCE DRAWINGS
3-1-2-15639	CT-17004 PAVING PLAN EAST SIDE

REV	DATE	JOB	DRAWING HISTORY & REVISIONS	DWN BY	CHK BY	PRJ ENG
1	12/24/07		AS-BUILT FOR CERTIFICATION			
0	4/14/06		ISSUED FOR CONSTRUCTION. MANUAL DWGS PER SEC			

APPROVED FOR CONSTRUCTION WHEN SIGNED BELOW
OCC PRJ MGR
DATE
CON PRJ MGR
DATE

JOB/CONT A231.	DWN BY SN	ENG SEC - S. Noltensmeyer	
ORIGIN DATE 12/20/07	CHK BY	PRJ MGR Swain Boyce	
SCALE 2"=1-0"	LAYOUT SHEET	DWG NO. 3-1-2-15640	REV 1

ATTACHMENT C
PHOTOGRAPHIC DOCUMENTATION

PHOTOGRAPH NO. 1

Date: 04/14/08
Direction: NE

Description:
Concrete cap located adjacent to the east of cooling tower.

PHOTOGRAPH NO. 2

Date: 04/14/08
Direction: N

Description:
View of the concrete cap from the south.

PHOTOGRAPH NO. 3

Date: 04/14/08
Direction: S

Description:
View of the concrete cap from the north.

PHOTOGRAPH NO. 4

Date: 04/14/08
Direction: SW

Description:
View of the concrete cap from the northeast.